REMARKS/ARGUMENTS

The sole claim is claim 6, which has been amended to better define the invention. Support for the amendment may be found, *inter alia*, in FIG. 1, FIG. 2, at the paragraph bridging pages 2 and 3 at lines 20-24 of page 2, at the second full paragraph on page 3 at lines 12-14 and lines 20-22 of page 3, at the second full paragraph of page 4 at lines 15-21 and lines 24-25 of page 4, at the first full paragraph of page 5 at lines 16-17 of page 5. Reconsideration is expressly requested.

As explained in the Preliminary Amendment in RCE of December 31, 2009, in the Advisory Action dated November 30, 2009, the Examiner maintained the rejection of the claims under 35 U.S.C. §103(a) set forth in the August 6, 2009 Final Office Action based on *U.S. Patent No. 6,406,458* to *Tillander, U.S. Patent No. 5,571,261* to *Sancoff et al.*, and *U.S. Patent No. 6,510,965* to *Decottignies et al.*

In the Examiner's view, the apparatus of the primary reference to *Tillander* had all the elements of main claim 6 except for the pressurized gas source. The Examiner also took the position that the secondary reference to *Sancoff et al.*

taught a replaceable pressurized air source. According to the Examiner, it would have been obvious to one of ordinary skill in the art to add the replaceable pressurized gas source of *Sancoff et al.* to the apparatus of *Tillander* to make an apparatus for the dosed dispensing of infusion fluids having the features recited in Applicants' main claim 6.

In response, Applicant filed a Preliminary Amendment in RCE on December 31, 2009 in which claim 6 was amended to include the subject matter of claim 5. Applicant now further amends claim 6 herein and respectfully traverses the Examiner's rejection for the following reasons.

As explained in the Preliminary Amendment in RCE of December 31, 2009, claim 6 was amended to include the subject matter of claim 5 of a first and second housing parts joined to each other at one side in an articulated manner and comprise a latching device on the opposite side. The Examiner had previously relied on *Decottignies et al.* as disclosing this feature of Applicant's amended claim 6.

As explained in the December 31, 2009 Preliminary Amendment in RCE, it is respectfully submitted that the Examiner's position

is incorrect because the embodiment of the device of *Sancoff et al.* relied on by the Examiner fails to include a "replaceable" pressurized gas source because the gas pressure packet 120 of *Sancoff et al.* cannot be combined to the pressure infusion apparatus of *Tillander* without impermissibly changing the principle of operation of the liquid delivery device of *Sancoff et al.*, and because *Decottignies et al.* teaches away from the Examiner's hypothetical combination of its latching apparatus with the replaceable pressurized gas of *Sancoff et al.* and the pressure infusion apparatus of *Tillander*.

It is respectfully submitted that claim 6 as further amended herein is patentable over the prior art references relied on by the Examiner for the following additional reasons.

As set forth in claim 6 as further amended herein, Applicant's invention provides an apparatus for dosed dispensing of an infusion fluid. In addition to the other features recited in claim 6 as amended, the apparatus has a membrane having a first end and a second end. The first and second ends of the membrane are attached to the housing in a region of a separation plane of first and second housing parts, which seals off the first housing part from the second housing part.

In this manner, Applicant's invention provides immediate or near immediate expulsion of an infusion fluid from the dispensing apparatus.

None of the references cited by the Examiner, whether taken separately or in combination, discloses or suggests an apparatus having the features of the apparatus recited in claim 6 as amended. None of the references cited by the Examiner, whether taken separately or in combination, discloses or suggests an apparatus that achieves the benefits of providing immediate or near-immediate expulsion of a dispensing fluid, allowing the significant mobility for a patient receiving dispensing fluid from the apparatus, all while maintaining the reusable nature and low operating costs for the device because of the replaceable nature of the gas pressurized source to the first valve and the first housing part.

The membrane of the apparatus according to claim 6, as amended, has a first end and a second end attached to the housing in a region of a separation plane of the first and second housing parts and therefore in its resting position forms a substantially flat surface. If a fresh infusion bag, as shown in FIG. 2, is inserted into the apparatus and both housing parts are closed,

the membrane nestles directly against the flexible wall of the liquid chamber, i.e. the infusion bag, whereby the infusion bag is directly put under pressure by the membrane, and based solely on the prestressing of the membrane, expulsion of the liquid at least up to the neutral position of the membrane is possible. FIG. 2 clearly shows the membrane nestled against the infusion bag.

The device according to *Tillander* admittedly also encompasses a membrane 27a, but in a technical sense does not represent a membrane but rather a kind of bellows. Membrane 27a, as explained in column 3, lines 41-45 of *Tillander*, consists of a non-flexible material which is so large that the membrane "lies against the bottom of the chamber". The membrane 27a is shown in FIG. 2 of *Tillander* as clearly resting on the bottom of the pressure chamber 27b. FIG. 2 also shows clearly the membrane 27a of *Tillander* being connected to the housing at an upper corner (far right in FIG. 2) which is not in a region of a separation plane of the first housing part and the second housing part.

In order for the device of *Tillander* to expel infusion liquid, firstly, a certain amount of pressure medium must be pumped into the pressure medium chamber until the membrane 27a

joins closely or nestles against the infusion bag and until the infusion bag is pressed against the opposite pressure medium chamber wall. Only then can expulsion of the infusion liquid take place.

In contrast to the apparatus of *Tillander*, with Applicant's apparatus as recited in claim 6 as amended, expulsion can occur immediately. As a result, with Applicant's apparatus as recited in claim 6 as amended, gas generators may be used which only have to procure a performance that is lower than the gas generators required for use with the apparatus of *Tillander*.

Accordingly, it is respectfully submitted that claim 6 as amended is patentable over the prior art rejection made by the Examiner for this additional reason.

Also as set forth in claim 6 as amended, Applicant's invention provides an apparatus with a first housing part and a second housing part. The first housing part of the apparatus includes a pressurized medium chamber and a first valve. The first valve is a control valve or a pressure reduction valve. A pressurized gas source is replaceably connected to the first valve for supplying pressurized gas to the pressurized medium

chamber. The first valve is directly connected to the pressurized medium chamber.

In this manner, Applicant's invention provides a compact device that allows mobility for a patient while the apparatus dispenses fluid to the patient, while maintaining the mostly reusable nature, cost-effective production, and low operating costs for the device.

It is respectfully submitted that none of the prior art references relied on by the Examiner, whether taken separately or in combination, discloses or suggests an apparatus for dosed dispensing of an infusion fluid as recited in claim 6 as amended, including providing a pressurized gas source that is replaceably connected to a first valve that is directly connected to a pressurized medium chamber for pressurizing via a membrane a flexible wall of a fluid-tight infusion bag to provide dosed dispensing of the fluid in the infusion bag.

In contrast, the primary reference to *Tillander* discloses a nipple 19 with a stop valve 34 that is remote from the pressurized medium chamber (27b in FIG. 3) along the path of the gas from the gas source to the membrane 27a. Before gas from an

external pump enters the pressurized medium chamber of the apparatus of *Tillander*, the gas must pass through an additional large storage chamber 25, an additional pressure reduction valve 26, and an additional close-off valve 17, as shown in FIG. 6 of *Tillander*. FIG. 6 of *Tillander* shows the flowpath of the gas of the FIG. 1 and FIG. 2 embodiment of the apparatus of *Tillander* with more clarity than FIG. 2. With this construction, as explained in the April 9, 2009 Amendment in Response to Office Action, the apparatus of *Tillander* has a size that far exceeds the size of the infusion bag, which restricts the mobility of the apparatus during use of dispensing fluid to a patient.

In contrast, Applicant's apparatus according to claim 6 as amended can have a smaller size which facilitates portability. It is respectfully submitted that contrary to the Examiner's Response to Arguments in section 13 of Page 4 of the August 6, 2009 Final Office Action, claim 6 as amended provides structural limitations establishing increased portability over the apparatus of *Tillander*.

The defects and deficiencies in this regard of the apparatus of *Tillander* are nowhere remedied by the secondary references of *Sancoff et al.* and *Decottignies et al.*

Sancoff et al. fails to disclose or suggest a pressurized gas source being connected to a valve, whereby the valve is directly connected to a pressurized medium chamber having a membrane.

Sancoff et al. fails to disclose or suggest using any valve along the path of the gas from the gas generating chamber to the pressure medium chamber where pressure is applied which forces liquid out of the device that can be used for a patient. The embodiment of the device relied on by the Examiner, shown in FIGS. 18 and 19 of *Sancoff et al.*, does not have any valve along the path of the gas from the gas source 118, 119, and 120 to the chamber (in which space 106 is seen) where the gas pressures the liquid 103 to leave the fluid compartment 101. The only valve disclosed for this embodiment is a one-way valve 107 that holds the liquid in the device that is only indirectly related to the operation of the gas of the device during operation of the apparatus.

The embodiment of the device of *Sancoff et al.* shown in FIGS. 3-6 of *Sancoff et al.* also lacks any valve along the short path of the gas from a gas generation chamber or area 30 to the pressurized medium chamber 36 (labeled in FIGS. 3 and 4) where

pressure is applied that forces the liquid 22 in an upper chamber out of the device.

Only an alternative embodiment of the device of *Sancoff et al.*, shown in FIG. 15, discloses any use of a pressure-relief valve 45 for the gas generated. FIGS. 20A-20B, 24-26, 27-30, and 31-32 show first, second, third, and fourth embodiments of the pressure-relief valve that can be used with this alternative embodiment of the device of *Sancoff et al.* These pressure relief valves, however, are in communication with the *gas generating* chamber only, and are not directly connected to the pressurized medium chamber. See column 17, lines 62-64, column 18, lines 37-40, and column 18, line 67 to column 19, lines 1-2 of *Sancoff et al.* These valves are connected to the gas generating chamber at one end, and are only further connected to the exterior of the device at the opposite end. See column 2, lines 60-63 of *Sancoff et al.*

The apparatus of *Decottignies et al.* is preferably used with an airless pump. See *Decottignies et al.* at column 3, lines 20-26. The resilient properties of the pouch of *Decottignies et al.* of shrinking in capacity allow the dispenser of *Decottignies et al.* to operate without any gas from an external source being

pumped into the dispenser. *Decottignies et al.* fails to expressly disclose the use of any valve, and fails to describe the apparatus of any pump used with its device intended to dispense lotions, creams, or other cosmetics.

Accordingly, it is respectfully submitted that claim 6 as amended is patentable over the prior art references relied on by the Examiner for this additional reason.

In summary, claim 6 has been amended. In view of the foregoing, it is respectfully requested that the sole claim 6 be allowed and that this application be passed to issue.

Respectfully submitted,
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I hereby certify that this correspondence is being deposited with the U.S. Postal Service as first class mail in an envelope addressed to: MAIL STOP AMENDMENT, Commissioner for Patents, Alexandria, VA, on January 26, 2010.

Amy Klein

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